

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
18 December 2003 (18.12.2003)

PCT

(10) International Publication Number
WO 03/104178 A1(51) International Patent Classification⁷: C07C 43/205,
49/84, 65/24, 309/60, 309/75, 309/47, 69/94, 57/50,
205/59, 323/43, 215/50, 219/22, 69/76, 211/57, 43/23,
43/225, 255/37, 65/28, C07D 319/22, A61K 31/075,
31/12, 31/185, 31/192, 31/205, 31/216, 31/255, 31/277,
31/357, A61P 25/00, 29/00, 31/00, 35/00, 37/00, 43/00(74) Agent: BLAKE DAWSON WALDRON PATENT SER-
VICES; Level 39, 101 Collins Street, Melbourne, VIC
3000 (AU).

(21) International Application Number: PCT/AU03/00716

(22) International Filing Date: 6 June 2003 (06.06.2003)

(25) Filing Language: English

(26) Publication Language: English

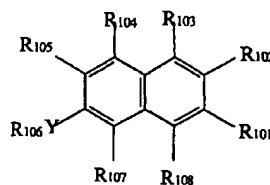
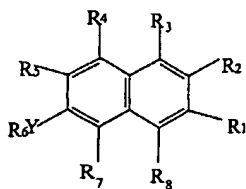
(30) Priority Data:
PS 2833 7 June 2002 (07.06.2002) AU
PS 2834 7 June 2002 (07.06.2002) AU(71) Applicant (for all designated States except US): CORTI-
CAL PTY LTD [AU/AU]; Commercial Office, Institute of
Reproduction and Development, Monash University, 27-31
Wright Street, Clayton, Victoria 3168 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): MORAND, Eric,
Francis [AU/AU]; 107 Ruskin Street, Elwood, Victoria
3184 (AU). ISKANDER, Magdy, Naguib [AU/AU]; 158
Beach Road, Sandringham, Victoria 3191 (AU).(81) Designated States (national): AE, AG, AL, AM, AT, AU,
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,
UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**Published:**

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: NAPHTHALENE DERIVATIVES WHICH INHIBIT THE CYTOKINE OR BIOLOGICAL ACTIVITY OF
MACROPHAGE MIGRATION INHIBITORY FACTOR (MIF)

(57) **Abstract:** Where Y, R₁-R₈ and R₁₀₁-R₁₀₈ are as defined in the specification. Compounds of formula (II) and methods of inhibiting the cytokine or biological activity of Macrophage Migrating Inhibitory Factor (MIF) comprising contacting MIF with a compound of formula (I) are provided. The invention also relates to methods of treating diseases or conditions where MIF cytokine or biological activity is implicated comprising administration of compounds of formula (I), either alone or as part of a combination therapy.